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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,584	10/31/2002	Hani Ikram Noshi	125739	9764

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EXAMINER	
KALIVODA, CHRISTOPHER M	
ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,584	NOSHI, HANI IKRAM	
	Examiner	Art Unit	
	Christopher M. Kalivoda	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-9 and 18-24* is/are allowed.

6)☒ Claim(s) *10,13-17 and 25* is/are rejected.

7)☒ Claim(s) *11 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Figure 4 shows reference sign 76 but this reference is not mentioned in the specification. In addition, Figure 5 shows reference sign 78 and this reference is not mentioned in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because the scale is too small and negatively affects the quality. To remedy this problem, Applicant is requested to send in larger figures for figure, especially for figure 4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter. The applicant filed an application, application number 10/065,584, entitled "Source Pin Loading Methods and Apparatus for Positron Emission Tomography", on October 31, 2002. Regarding independent claims 1 and 18, a review of prior art failed

to disclose or make obvious a Positron Emission Tomography system in which the source pin is moved from the storage device to the transmission ring using magnetic forces. This method includes moving the source pin from the storage device to the transmission ring using a magnetic force greater than the magnetic force of the permanent magnet and less than the combined magnetic force of an electromagnet and permanent magnet.

Claims 2 – 9 are allowable by virtue of their dependence upon claim 1 or claims that depend upon claim 1.

Claims 19 – 24 are allowable by virtue of their dependence upon claim 18 or claims that depend upon claim 18.

Claims 11 – 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claims would be allowable because of the use of both permanent magnets and electromagnets.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 10 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Maki, et al. U.S. Patent 6,434,216. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Regarding claim 10, Maki, et al. teach an imaging system comprising:

a. a rotatable ring (see column 1, line 67 and column 2, line 1 and Fig 1, ref sign 14);

b. a storage device adjacent said transmission ring (see column 1, line 67 and column 2, line 1 and Fig 1, ref sign 16);

c. at least one source pin sized to be storable in said storage device, said storage device having a magnetic force holding said pin in place (see column 2, lines 48-50);

d. a source of magnetic force on said transmission ring, said source configured to move said source pin between said storage device and said transmission ring (see column 2 lines 34-36). For clarity, there is also an intervening step where the

engagement portion of the latch arm engages the pin frictionally but the magnetic force on the transmission ring also moves the source pin between the storage device and transmission ring.

Regarding claim 13, the magnet used on the transmission ring is a permanent magnet (see column 2 lines 34-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14 – 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maki, et al. US. Patent 6,434,216 in view of Haynor, et al. U.S. Patent 6,129,668. Regarding claim 14, Maki, et al. teach an imaging system comprising:

a. a rotatable transmission ring (see column 1, line 67 and col 2, line 1 and Fig 1, ref sign 14);

b. a storage device adjacent said transmission ring (see column 1, line 67 and column 2, line 1 and Fig 1, ref sign 16);

However, the reference is silent with respect to a proximity sensor positioned to sense a presence of a source pin in said storage device.

Haynor, et al. teaches the use of inductive sensors (or proximity sensors) to detect the position of a magnet in PET systems (see column 3, line 28 and column 13, lines 17-22).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a proximity sensor positioned to sense a presence of a source pin (that is also magnetic) in said storage device.

The motivation for such a modification would be to detect the position of a magnet (see column 2, lines 50-53).

Regarding claim 15, Maki, et al. in view of Haynor, et al. teach the limitations of claim 14 as described above. The use of NPN sensor is a matter of design choice.

One skilled in the art would be motivated to use NPN transistors because they are commercially available and inexpensive.

Regarding claim 16, Maki, et al. in view of Haynor, et al. teach the limitations of claim 14 as described above. In addition, Maki, et al teaches the storage device comprising a magnetic force holding the pin in place (see column 2, lines 43-53 and column 3, lines 17-30). The storage container is made of a magnetic material, such as

stainless steel, and the source pin has a magnetic collar so there is a magnetic force holding the pin in place.

Regarding claim 17, Maki, et al. in view of Haynor, et al. teach the limitations of claim 15 as described above. In addition, Maki, et al teach the rotatable transmission ring comprising a source of magnetic force configured to move said source pin between said storage device and said transmission ring (see column 2 lines 34-36). For clarity, there is also an intervening step where the engagement portion of the latch arm engages the pin frictionally but the magnetic force on the transmission ring also moves the source pin between the storage device and transmission ring.

Regarding claim 25, Maki, et al. teach a Positron Emission Tomography (PET) System comprising:

a. a rotatable ring (see column 1, line 67 and column 2, line 1 and Fig 1, ref sign 14);

b. a storage device adjacent said transmission ring (see column 1, line 67 and column 2, line 1 and Fig 1, ref sign 16);

c. at least one source pin sized to be storable in said storage device, said storage device having a magnetic force holding said pin in place (see column 2, lines 48-50);

d. a source of magnetic force on said transmission ring, said source configured to move said source pin between said storage device and said transmission ring (see

column 2 lines 34-36). For clarity, there is also an intervening step where the engagement portion of the latch arm engages the pin frictionally but the magnetic force on the transmission ring also moves the source pin between the storage device and transmission ring.

However, the reference is silent with respect to a proximity sensor positioned to sense the presence of said source pin within said storage device.

Haynor, et al. teaches the use of inductive sensors (or proximity sensors) to detect the position of a magnet in PET systems (see column 3, line 28 and column 13, lines 17-22).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a proximity sensor positioned to sense a presence of a source pin (that is also magnetic) in said storage device.

The motivation for such a modification would be to detect the position of a magnet (see column 2, lines 50-53).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,434,216 to Maki, et al. describes a source pin

loader. The method involves the use of a latch arm in detaching the source pin from a storage device that magnetically holds the source pin in place. The pin is then pushed to the transmission ring where it is magnetically attached. The latch arm is then removed and retracted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (703)-305-7443. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703)-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

cmk
May 2, 2003

JOHN R. LEE
SUPERVISORY PATENT EXAMINER
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